



DEPARTMENT OF AGRICULTURE

Rural Utilities Service

7 CFR Parts 1728 and 1755

Standards and Specifications for Timber Products Acceptable for Use by Rural Utilities Service Electric and Telecommunications Borrowers

AGENCY: Rural Utilities Service, USDA.

ACTION: Final rule; request for comments.

SUMMARY: The Rural Utilities Service (RUS), an agency of U.S. Department of Agriculture, is amending its regulations on Electric and Telecommunications Standards and Specifications for Materials, Equipment and Construction, to make changes to Bulletin 1728F-700, RUS Specification for Wood Poles, Stubs and Anchor Logs; Bulletin 1728H-701, Specification for Wood Crossarms, Transmission Timbers, and Pole Keys; and Bulletin 1728H-702, Specification for Quality Control and Inspection of Timber Products (Wood Bulletins) to keep RUS standards current with the technology advances and consistent with the industry practice. The bulletins are provided as regulated specifications to RUS Electric Program borrowers for procurement of electric transmission and distribution line wood materials.

DATES: *Effective Date:* This final rule is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Comments Due Date: Comments are due no later than [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Incorporation by Reference: The incorporation by reference of certain publications listed in this rule is approved by the Director of the Federal Register as of [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Submit comments identified as 7 CFR 1728.97(a)(21) Bulletin 1728F-700, 7 CFR 1728.201 Bulletin 1728H-701, and/or 7 CFR 1728.202 Bulletin 1728H-702 by the following method:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and, in the lower "Search Regulations and Federal Actions" box, select "Rural Utilities Service" from the agency drop-down menu, then click on "Submit." In the Docket ID column, select RUS-18-ELECTRIC-0008 to submit or view public comments and to view supporting and related materials available electronically. Information on using Regulations.gov, including instructions for accessing documents, submitting comments, and viewing the docket after the close of the comment period, is available through the site's "User Tips" link.

Other Information: Additional information about Rural Development and its programs is available on the Internet at: <https://www.usda.gov/topics/rural>.

FOR FURTHER INFORMATION CONTACT: Chendi Zhang, Mechanical Engineer
Engineering Standards Branch, Electric Programs | Rural Utilities Service | Rural Development
U.S. Department of Agriculture, 1400 Independence Ave, SW | Washington, DC 20250-1567 |
Phone: 202-690-9032 | email: Chendi.Zhang@usda.gov.

SUPPLEMENTARY INFORMATION:

Executive Order 12866

This final rule is exempt from the Office of Management and Budget (OMB) review for purposes of Executive Order 12866 and, therefore, has not been reviewed by OMB.

Executive Order 12372

This final rule is excluded from the scope of Executive Order 12372, Intergovernmental Consultation, which may require consultation with State and local officials. A notice of final rule entitled “Department Programs and Activities Excluded from Executive Order 12372,” (50 FR 47034) exempted the Rural Utilities Service loans and loan guarantees from coverage under this order.

Executive Order 12988

This final rule has been reviewed under Executive Order 12988, Civil Justice Reform. The Rural Utilities Service has determined that this rule meets the applicable standards provided in section 3 of the Executive Order. In addition, all state and local laws and regulations that are in conflict with this final rule will be preempted. No retroactive effect will be given to this final rule and in accordance with section 212(e) of the Department of Agriculture Reorganization Act of 1994 (7 U.S.C. 6912(e)) administrative appeal procedures, if any, must be exhausted before an action against the Department or its agencies may be initiated.

Executive Order 13132

This final rule will not have substantial direct effects on the States, on the relationship between the national government and the States, or on distribution of power and responsibilities among the various levels of government. Under Executive Order 13132, this final rule does not have sufficient federalism implications to require preparation of a Federalism Assessment.

Regulatory Flexibility Act Certification

The Rural Utilities Service has been determined that the Regulatory Flexibility Act is not applicable to this rule since USDA Rural Utilities Service is not required by 5 U.S.C. 551 et seq. or any other provision of the law to publish a notice of proposed rulemaking with request to the subject matter of this rule.

Information Collection and Recordkeeping Requirements

This final rule contains no new reporting or recordkeeping burdens under OMB control number 0572-0076 that would require approval under the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35, as amended).

Catalog of Federal Domestic Assistance

The program described by this final rule is listed in the Catalog of Federal Domestic Assistance Programs under No. 10.850, Rural Electrification Loans and Loan Guarantees. This catalog is available on a subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-9325, telephone number (202) 512-1800.

Unfunded Mandates

This final rule contains no Federal Mandates (under the regulatory provision of title II of the Unfunded Mandates Reform Act of 1995 [2 U.S.C. Chapter 25]) for State, local, and tribal governments or the private sector. Thus, this final rule is not subject to the requirements of sections 202 and 205 of the Unfunded Mandates Reform Act of 1995.

National Environmental Policy Act Certification

The Rural Utilities Service has determined that this final rule will not significantly affect the quality of the human environment as defined by the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.). Therefore, this action does not require an environmental impact statement or assessment.

USDA Non-Discrimination Statement

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights in any program or activity conducted or funded by the Department. (Not all prohibited basis will apply to all programs and/or employment activities.) Remedies and complaint filing deadlines vary by program or incident. Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotope, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form (PDF), found online at http://www.ascr.usda.gov/complaint_filing_cust.html, or at any USDA office, or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992 to request the form. Submit your completed complaint form or letter to USDA by: (1) Mail at U.S. Department of Agriculture, Office of Assistant Secretary for Civil Rights, 1400 Independence Avenue SW., Washington, DC 20250-9410, by Fax (202) 690-7442 or Email at program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.

BACKGROUND

General Discussion

The Rural Utilities Service maintains bulletins that contain construction standards and specifications for materials and equipment. These standards and specifications apply to systems constructed by electric and telecommunications borrowers in accordance with the loan contract, and contain standard construction units, materials, and equipment units used on electric and telecommunications borrowers' systems. The following bulletins establish standards for the manufacture and inspection of wood utility poles, crossarms and pole keys: Bulletin 1728F-700, "RUS Specification for Wood Poles, Stubs and Anchor Logs" (incorporated by reference at §1728.97); 7 CFR 1728.201 "Bulletin 1728H-701, Specification for Wood Crossarms (Solid and laminate), Transmission Timbers, and Pole Keys;" and 7 CFR 1728.202 "Bulletin 1728H-702, Specification for Quality Control and Inspection of Timber Products."

Changes to the Regulations

The Agency is affording the public an opportunity to comment on the following changes to standards and specifications as applied to systems constructed by electric and telecommunications borrowers:

1. Changes relevant to Bulletin 1728F-700 (incorporated by reference at §1728.97), 7 CFR 1728.201, Bulletin 1728H-701, and 7 CFR 1728.202, Bulletin 1728H-702:

(a) Significantly limit the number of individual AWPA standards contained in the reference section of the current RUS specifications.

RUS references several other national standards/specifications in the wood products specifications. For the RUS standards to keep current with each of these referenced documents,

RUS would basically have to change their wood product specifications to some degree every year. The AWP standards referenced in RUS specifications could best be kept current by simply referencing two broad AWP standards, AWP Standard U1, User Specification for Treated Wood and AWP Standard T1, Processing and Treatment Standard, rather than listing each individual AWP standard that is currently referenced in the RUS wood product specifications. All the information contained in the long list of individual AWP standards now found in the RUS wood product specifications is found somewhere in either of these two AWP standards.

(b) Add language to the specifications requiring that all third-party agencies involved in the inspection of RUS products must, on an annual basis, provide RUS Technical Standards Committee "A" with proof that the agency does have: (1) the required insurance coverage, and (2) the required, fully equipped laboratory capable of running each of the referee methods of analysis.

While these two requirements themselves are not new, providing proof of such to RUS on an annual basis is new. The reason for making this change is that in recent years, there apparently have been several instances where third-party agencies involved in RUS inspection did not have the required insurance or the required lab facilities. Given that RUS currently does not have the ability to provide an active overview of these third-party agencies, this change simply provides RUS with a method for checking the basic legitimacy of any company involved in the inspection of RUS treated wood products. It also provides both RUS and the cooperative borrower with some possible source of fiscal recovery if problems with product service in line can be traced back to performance issues involving the third-party agency being utilized.

(c) Addition of language that clearly defines the different function of plant quality control versus the function of third-party inspection.

This is a small but important change, in that over the past 30-40 years there has been a deliberate ongoing attempt by many former and some current inspection agencies to blur the distinction between the two functions to promote their inspection services. It is extremely important that the cooperative utilities using these RUS specifications understand exactly what the different function of plant quality control and of third-party inspectors are, that these two are separate and distinct functions, and that each has very specific requirements. Clarifying the two will make it clear that the responsibility for product quality does and always has rested with the producer, eliminating the widespread fallacy that the responsibility for product quality lies with the third-party inspector.

(2) Changes relevant only to Bulletin 1728F-700, (7 CFR 1728.97, Incorporation by reference of electric standards and specifications, (incorporation approved for 7 CFR 1728.98) and 7 CFR 1728.202, Bulletin 1728H-702:

Addition of language listing the referee methods of analysis for each of the major types of preservatives used to treat RUS poles and crossarms.

Over the last couple of decades, much of the wet chemistry that was previously used to run retention analyses on treated wood poles and crossarms has shifted to more modern and efficient methods, such as X-ray fluorescence. This addition simply notes the current referee methods for plant quality control labs and for the laboratories that must be maintained by any third-party inspection agency involved in the inspection of RUS treated wood products.

(3) Changes relevant only to Bulletin 1728F-700, “Specification for Wood Poles, Stubs and Anchor Logs (incorporated by reference at §1728.97).”

(a) Eliminate northern white cedar as an acceptable pole species, and eliminate any reference to it.

No manufacturer has produced a northern white cedar pole in over four decades. Given the availability of many other far superior species of trees for use as poles and crossarms, northern white cedar will not be used for poles again. Removing it from the specification does not affect a single producer.

(b) Change the restriction on the defect known as shelling to match the shelling restrictions recently adopted by ANSI in their O5.1 pole specification.

RUS currently restricts shelling to no more than one inch deep at any point on a pole’s surface. That used to match the ANSI restriction for the same defect. Knowing this is a very dangerous defect that can cause utilities a lot of problems, several years ago ANSI decided to add an additional restriction to their shelling allowance. The current ANSI O5.1 language on shelling restrictions reads “Shelling on the surface of the pole shall be limited to no more than one inch in depth nor exceed 1/3 of the pole’s circumference at the point of shelling.”

Manufacturers are already operating under the current ANSI shelling restriction, so RUS adopting it in their specification will have no impact on the industry while providing a better overall product for cooperatives.

(c) Modify the language in the RUS specification dealing with rate of growth requirements for poles.

RUS has always had a rate of growth requirement (ring count requirement) to ensure that the trees used for poles have adequate strength characteristics. Given that ring count is a critical

component in determining the strength of an individual pole, the proposed language modification to denote a “referee” method for determining ring count is a very important improvement to the current RUS specifications. This change will have no impact on the way ring count is currently determined, just provides clarification about how any difference of opinion over ring count in an individual pole is to be determined if there is a difference of opinion on the issue between two parties.

(d) Modify the language that “no pole treated with an oil-borne preservative (penta and copper naphthenate) or with creosote can be shipped to a RUS borrower more than two years after its original treatment date” to also include poles treated with water-borne preservatives such as CCA or ACZA.

The language modification is to make this two-year restriction applicable to all RUS poles, regardless of type of treatment. This change will bring all of the major preservatives under the same restriction. Given that both oil-borne preservatives and creosote do migrate over time to the low side of stored poles, it prevented potential problems with pole service life due to possibly significantly lower preservative content on the top side of poles held in a producer’s treated stock for an extended period. This two year “drop-dead” requirement also encouraged manufacturers to rotate their stock on a reasonably short basis, meaning they could provide their cooperative customers with the “new” fresher poles that utilities expected when they made pole purchases.

(e) Addition of a specific listing in Table 10 in Appendix A of Bulletin 1728F-700, the pole specification, that allows for the treatment Alaska Yellow Cedar with copper naphthenate.

Normally when cedar poles are produced, the vast bulk of the cedar itself is one species, western red cedar. However, a small amount of that volume might also be Alaska yellow cedar. The two species are quite similar in the way they look and treat. Apparently at least one large

producer in the western region has developed a significant supply of Alaska yellow cedar that they wanted to produce and treat with copper naphthenate on a full charge basis. The species is a very good pole species, but there was no allowance for treating full charges composed of only Alaska yellow cedar in RUS Table 10. This change will add that allowance to Table 10. Overall, it will have a negligible impact on the industry because of the relatively scarcity of pure stands of Alaska yellow cedar.

(4) The following changes in the rule making are relevant only to 7 CFR 1728.201, RUS Bulletin 1728H-701, "Specification for Wood Crossarms (Solid and Laminated), Transmission Timbers and Pole Keys."

(a) Eliminate the allowance for producing thermal non-pressure treated crossarms.

The last thermal dip treating facility for crossarms was closed over 35 years ago. All of the crossarms produced today, whether Douglas-fir or southern pine, are pressure treated. Pressure treatment provides a much more uniform treatment and a far better product.

(b) Slight modification of the language contained in the one-year warranty for RUS crossarms to address the fact that no crossarms are sold directly from a crossarm producer to a cooperative, but rather are sold only through distributorships.

The current language in the crossarm warranty states "If any crossarm is determined to be defective within 1 year after delivery to the borrower, it shall be replaced as promptly as possible by the producer." The modification simply replaces the word "producer" with the word "supplier". The term "supplier" is already properly defined elsewhere in the specification.

(5) The following changes in the rule making are relevant only to 7 CFR 1728.202, Bulletin 1728H-702, “Specification for Quality Control and Inspection of Timber Products.”

(a) *Remove the Insured Warranty Program (IW) as a purchase plan for poles.*

The IW program was started back in the late 60’s as another option for cooperative borrowers to use for inspection of RUS treated poles they were purchasing. The IW program ended in the mid 70’s. Given that insurance premiums on a natural product like a wood pole or crossarm are very expensive (if an agency will even provide the coverage at all), and that there are other effective purchase plans available to cooperatives, and that IW hasn’t been used in over 40 years, it needs to be removed from the specifications.

(b) Relocation of appendix A (formerly located in § 1728.202).

Appendix A, Inspector’s Qualifications, was formerly located in § 1728.202. It is relocated to new §1728.203, Inspector’s qualifications, to comply with the codification requirements in 1 CFR chapter I.

Incorporation by reference

Bulletin 1728F–700, RUS Specification for Wood Poles, Stubs and Anchor Logs. This specification describes the minimum acceptable quality of wood poles, stubs, telephone pedestal stubs, and anchor logs (hereinafter called poles, except where specifically referred to as stubs or anchor logs) purchased by or for RUS borrowers. The requirements of this specification implement contractual provisions between RUS and borrowers receiving financial assistance from RUS.

RUS provides free online public access to view and download copies of Bulletin 1728-F 700. The RUS website to view and download this bulletin is:
<https://www.rd.usda.gov/publications/regulations-guidelines/bulletins/electric>.

AITC 200- 2009, Manufacturing Quality Control Systems Manual for Structural Glued Laminated Timber, details requirements for quality control in accordance with the ANSI/AITC A190.1 - 1992. Laminators quality control system and inspection of plant quality control system by AITC Inspection Bureau are detailed. Topics addressed are personnel, equipment and facilities, quality control of production operations, testing and inspection requirements, test procedures, AITC tests, definitions and annexes. Recommended for manufacturers of glued laminated timber, third party testing and inspection agencies, and quality assurance agencies.

AITC Publications may be available for a fee by calling 503-639-0651, or as a free download online at their web address: <https://www.aitc-glulam.org/index.asp>. The AITC 200-2009 standard is reasonably available for a fee.

ANSI O5.2-2012, Structural Glued Laminated Timber for Utility Structures, covers requirements for manufacturing and quality control of structural glued laminated timber of Southern Pine, Coastal Region Douglas Fir, Hem Fir and other species of similar treatability for electric power and communication structures.

ANSI O5.3-2015, Solid Sawn Wood Crossarms & Braces: Specifications & Dimensions, consists of specifications covering solid sawn-wood crossarms and braces manufactured from coastal Douglas-fir and from dense Southern pine. The specifications are intended to cover communications crossarms, power crossarms, heavy-duty crossarms, and heavy-duty braces.

ANSI standards are reasonably available to obtain by calling 212-642-4980 or by online access at their web address: <https://webstore.ansi.org/> for a fee. ANSI O5.2-2012 and ANSI O5.3-2015 are also available for a fee in ANSI O5. - Wood Poles Package.

AWPA A6-15, Method for the Determination of Oil-Type Preservatives and Water in Wood.

This method is suitable for the determination of creosote, petroleum, and their solutions in treated wood when the sample contains at least 5.0 grams of wood and one gram of oil.

Additives, such as copper naphthenate or pentachlorophenol, may not be quantitatively extracted by this method. The method can also be used for the determination of water in treated or untreated wood, but when it is so used, the directions on handling the sample in Standard M2 must be followed carefully.

AWPA A9-18, Standard Method for Analysis of Treated Wood and Treating Solutions By X-Ray Spectroscopy. This method provides for the non-destructive analysis of treated wood and treating solutions by X-ray fluorescence spectroscopy and is applicable to the determination of elements of atomic number 5 or higher that are present in significant quantity in the wood (usually above 0.05%). The elements covered in this method are specified for use in preservative and fire-retardant treatment of wood.

AWPA A15-18, Referee Methods. Referee methods are given to assist in the resolution of disputes over the acceptability of the active(s) in treated wood products.

AWPA A83-18, Standard Method for Determination of Chloride for Calculating Pentachlorophenol in solution or Wood. The Methods, commonly called the "lime ignition" method, describes the chemical analysis of treating solutions which contain pentachlorophenol, of pentachlorophenol concentrates, and of wood treated with pentachlorophenol.

AWPA M2-16, Standard for the Inspection of Preservative Treated Products for Industrial Use. This Standard provides procedures for inspection at wood preserving plants of industrial

products including but not limited to poles, crossarms, piling, ties, timbers, round posts and composite wood products. This Standard also contains detailed procedures and test methods for determining the conformance of treated wood products with specified standards or other written product quality specifications.

AWPA M3-16, Standard for the Quality Control of Preservative Treated Products for Industrial Use. This Standard provides procedures for quality control at wood preserving plants of industrial products, including but not limited to poles, crossarms, piling, ties, timbers, round posts and composite wood products. This standard contains minimum requirements for the treating plant quality control to monitor the treating plant and process, sample treated products and determine conformance to the applicable portions of Standards U1 and T1 or other written product quality specifications.

AWPA T1-18, Use Category System: Processing and Treatment Standard This Processing and Treatment Standard contains the minimum requirements and process limitations for treating wood products under the AWPA Standards. This includes conditioning of material for treatment, treatment processes and limitations, end-results of treatment, post treatment handling, and quality control applicable to all commodities treated under the AWPA Use Category System.

AWPA U1-18, Use Category System: User Specification for Treated Wood. The Use Category System (UCS) of the American Wood Protection Association (AWPA) designates what preservative systems and retentions have been determined to be effective in protecting wood products under specified exposure conditions.

AWPA standards are reasonably available to obtain for a fee by calling 1-855-999-9870 or by online access at the web address: https://www.techstreet.com/standards/awpa-a9-18?product_id=2017417 for a fee. AWPAs standards are also available for a fee in 2018 AWPAs Book of Standards at <http://www.awpa.com/standards/index.asp>.

Standard Grading Rules for Southern Pine Lumber, 2014 Edition. Standard definitions and classifications of the most common characteristics and causes for grade limitation for Southern Pine lumber are provided. Also provided are descriptions of the characteristics allowed in southern pine lumber and other information such as general grade characteristics, definitions of lumber for different uses, moisture content, claim procedures and significant classes of lumber. The Inspection and Shipping Provisions of the Standard Grading Rules for Southern Pine Lumber represents customary usage and fair-trade practice.

This standard is reasonably available to obtain by online access at the web address for a fee by an order form: <https://www.spib.org/docs/litorderform.pdf> for a fee. Order forms can be emailed to spib@spib.org or faxed to 850-434-1290.

Standard No. 17, Grading Rules for West Coast Lumber. These rules apply to lumber species manufactured from timber grown in the West Coast region which includes the summit area of the Cascade Mountains and west to the Pacific Ocean in the states of Washington and Oregon, and in the entire state of California, and to those species of foreign origin specifically listed in these rules.

This standard is reasonably available by online access at the web address:

[https://www.wclib.org/publications/ rules-17/](https://www.wclib.org/publications/rules-17/) for a free download or purchase for a fee.

List of Subjects

7 CFR Part 1728

Electric power, Incorporation by reference, Loan programs-energy, Reporting and recordkeeping requirements, Rural areas.

7 CFR Part 1755

Incorporation by reference, Loan programs-communications, Reporting and recordkeeping requirements, Rural areas, Telephone.

For reasons set forth in the preamble, chapter XVII of title 7 of the Code of Federal Regulations is amended as follows:

PART 1728 – ELECTRIC STANDARDS AND SPECIFICATIONS FOR MATERIALS AND CONSTRUCTION

1. The authority citation for part 1728 continues to read as follows:

Authority: 7 U.S.C. 901 et seq., 1921 et seq., 6941 et seq.

2. Amend §1728.97 by:

a. Revising the introductory text and paragraphs (a) introductory text, (a)(21), (b), and (c);

b. Redesignating paragraph (g)(1) as paragraph (g)(3) and paragraphs (d)(1) and (2) as paragraphs (g)(1) and (2);

c. Removing paragraph (d) and redesignating paragraphs (e) through (i) as paragraphs (d) through (h);

d. Revising newly redesignated paragraph (d) introductory text, newly redesignated paragraph (e), newly redesignated paragraph (f) introductory text, and newly redesignated paragraphs (g) and (h).

The revisions and additions read as follows:

§1728.97 Incorporation by reference of electric standards and specifications.

Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved material is available for inspection at the Rural Utilities Service, U.S. Department of Agriculture, Room 5170-S, Washington, DC 20250–1522, call (202) 720-8674 and is available from the sources listed in this section. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030 or go to www.archives.gov/federal-register/cfr/ibr-locations.html.

(a) Rural Utilities Service, U.S. Department of Agriculture, Room 5170-S-S, U.S. Department of Agriculture, Washington, DC 20250. For information on the availability of this material, call (202) 720-8674 or go to: <https://www.rd.usda.gov/publications/regulations-guidelines/bulletins>.

* * * * *

(21) Bulletin 1728F–700, RUS Specification for Wood Poles, Stubs and Anchor Logs (April 15, 2019), incorporation approved for §§1728.98 and 1728.202.

* * * * *

(b) American Institute of Timber Construction (AITC), 7012 S. Revere Park Way, Englewood, Colorado 80112, telephone (303) 792-9559, web address: <https://www.aitc-glulam.org/index.asp>.

(1) AITC 200-2009, Manufacturing Quality Control Systems Manual For Structural Glued Laminated Timber, copyright 2009, incorporation by reference approved for §§1728.201 and 1728.202.

(2) [Reserved]

(c) American National Standards Institute (ANSI), 25 West 43rd Street, New York, New York 10036, telephone (212) 642-4900, Web address: <http://www.ansi.org>.

(1) ANSI O5.2-2012, Structural Glued Laminated Timber for Utility Structures, approved May 9, 2012, incorporation by reference approved for §§ 1728.201 and 1728.202.

(2) ANSI O5.3-2015, Solid Sawn Wood Crossarms & Braces: Specifications & Dimensions, approved January 9, 2015, incorporation by reference approved for §1728.201.

(d) ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, Telephone: (610) 832-9585, Web site: www.astm.org.

* * * * *

(e) American Wood Protection Association (AWPA), P.O. Box 361784, Birmingham, AL 35236-1784, telephone 205-733-4077, <http://www.awpa.com/>.

(1) AWPA A6-15, Method for the Determination of Retention of Oil-Type Preservatives from Small Samples, Reaffirmed 2015, incorporation by reference approved for §1728.202.

(2) AWWA A9-18, Standard Method for Analysis of Treated Wood and Treating Solutions By X-Ray Spectroscopy, Revised 2018, incorporation by reference approved for § 1728.202.

(3) AWWA A15-18, Referee Methods, Revised 2018, incorporation by reference approved for §1728.202.

(4) AWWA A83-18, Standard Method for Determination of Chloride for Calculating Pentachlorophenol in Solution or Wood, Reaffirmed 2018, incorporation by reference approved for §1728.202.

(5) AWWA M2-16, Standard for the Inspection of Preservative Treated Products for Industrial Use, Revised 2016, incorporation by reference approved for §1728.202.

(6) AWWA M3-16, Standard for the Quality Control of Preservative Treated Products for Industrial Use, Revised 2016, incorporation by reference approved for §§1728.201 and 1728.202.

(7) AWWA T1-18, Use Category System: Processing and Treatment Standard, Revised 2018, incorporation by reference approved for §1728.201.

(8) AWWA U1-18, Use Category System: User Specification for Treated Wood, Revised 2018, incorporation by reference approved for §§1728.201 and 1728.202.

(f) Insulated Cable Engineers Association (ICEA). The following material may be purchased from: IHS Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112, Phone: (303) 397-7956; (800)-854-7179, Fax: (303) 397-2740, email: global@ihs.com, Web site: <http://global.ihs.com>.

* * * * *

(g) Southern Pine Inspection Bureau Standards, 4709 Scenic Highway, Pensacola, Florida 32504-9094, telephone (850) 434-2611. The web address for the Southern Pine Inspection Bureau is <http://www.spib.org/>.

(1) Standard Grading Rules for Southern Pine Lumber, 2014 Edition, effective January 25, 2014, incorporation by reference approved for §1728.201.

(2) [Reserved]

(h) West Coast Lumber Inspection Bureau, P.O. Box 23145, Portland, Oregon 97281, telephone (503) 639-0651, fax (503) 684-8928. The web address for is <http://www.wclib.org/>.

(1) Standard No. 17, Grading Rules for West Coast Lumber, Revised September 1, 2018, incorporation by reference approved for §1728.201.

(2) [Reserved]

3. Revise §1728.98(a)(21) to read as follows:

§ 1728.98 Electric standards and specifications.

(a) * * *

(21) Bulletin 1728F-700, RUS Specification for Wood Poles, Stubs and Anchor Logs (April 15, 2019).

* * * * *

4. Revise §1728.201 to read as follows:

§ 1728.201 Bulletin 1728H-701, Specification for Wood Crossarms (Solid and Laminated), Transmission Timbers and Pole Keys.

(a) *Scope.* (1) The specification in this section describes the minimum acceptable quality of wood transmission and distribution crossarms (hereinafter called arms) purchased by or for RUS borrowers. Where there is conflict between the specification in this section and any other specification referred to in this section, the specification in this section shall govern.

(2) The requirements of the specification in this section implement contractual provisions between RUS and borrowers receiving financial assistance from RUS. The contractual agreement between RUS and a RUS borrower requires the borrower to construct its system in accordance with RUS accepted plans and specifications. Each RUS electric and telecommunications borrower shall purchase only arms produced in accordance with the specification in this section. Each RUS electric and telecommunications borrower shall require a written confirmation from their selected contractor that all material utilized shall be produced in accordance with the specifications in this section.

(b) *General stipulations.* (1) Conformance of arms to RUS specifications is the responsibility of the producer. A member of the producer's staff shall be designated as quality control supervisor and charged with the responsibility for the exercise of proper quality control procedures throughout the production process. The primary responsibility of third-party inspection agencies is to verify that producers involved in the manufacture of RUS treated wood products have functional in-house quality control systems in place that result in the shipment of materials meeting applicable RUS specification requirements to borrowers.

(2) Treated wood products intended for RUS borrowers shall not be inspected when in the opinion of the inspector, unsafe conditions are present.

(3) Various requirements relating to quality control and inspection that are contained in §1728.202 and ANSI O5.2 and ANSI O5.3 (both incorporated by reference in §1728.97) shall be followed exactly and shall not be interpreted or subject to judgment by the producer's quality control personnel or by the third party inspector.

(4) The requirements of AWWA M3 (incorporated by reference in §1728.97) pertaining to record keeping, pre-treatment storage, analytical laboratories, plant gauges and other plant facilities, shall be followed.

(5) The producer shall maintain its own properly staffed and equipped analytical laboratory or contract with an independent testing laboratory at or near the treating plant to provide the required analytical service. On a case-by-case basis, with written permission from RUS, a producer with more than one treatment facility may be allowed to use a central laboratory.

(6) Arms can be purchased under either of two purchase plans; a RUS approved Quality Assurance Plan or an Independent Inspection Plan. The method of inspection described in this section shall be used no matter which plan timber products are purchased under.

(7) All third-party inspectors involved in the inspection of RUS products shall maintain their impartiality when providing their inspection service. This requires that these individuals and their employers, as well as producers and suppliers involved in providing RUS borrowers with treated wood products, maintain a professional separation during the performance of their respective functions to eliminate any possible conflict of interest.

(8) With the exception of financial agreements for inspection services, inspection agencies shall neither accept nor provide gratuities or free services to suppliers.

(9) Inspection agencies shall not offer product warranties on inspected material.

(10) Arms shall be warranted to conform to this specification. Arms shall meet or exceed their minimum allowable dimensions for at least one year from time of delivery to the borrower. If any arm is determined to be defective or does not conform to this specification within 1 year from the date of delivery to the borrower, it shall be replaced as promptly as possible by the supplier. In the event of failure to do so, the purchaser may make such replacement and the cost of the arm, at destination, shall be recovered from the supplier.

(c) *Definitions.* The following definitions apply to this section:

Agency refers to Rural Utilities Service (RUS), United States Department of Agriculture.

Certificate of compliance is a written certification by an authorized employee of the producer that the material shipped meets the requirements of this specification and any supplemental requirements specified in a purchase order from a borrower or the borrower's contractor.

Crossarm refers to the structural wood member used to support electrical conductors and equipment. The word arm is used interchangeably with crossarm.

Independent inspection refers to examination of material by a trained inspector employed by a commercial inspection agency.

Inspection means an examination of material in sufficient detail to ensure conformity to all requirements of the specification under which it was purchased.

Lot is a certain number of pieces of a given item submitted for inspection at one time.

Producer is the party who manufactures arms. In some cases the producer may also be the treating plant.

Purchaser refers to either the RUS borrower or contractors acting as the borrower's agent, except where a part of the specification in this section specifically refers to only the borrower or the contractor.

Quality control supervisor refers to an employee of the producer designated to be responsible for quality control procedures carried out by said producer.

Reserve treated stock consists of treated material held in storage by a producer for purchase and immediate shipment to a borrower.

Supplier may refer to the producer, the treater, or to a third-party broker or distributorship involved in supplying RUS products to the borrowers.

Treating plant is the facility that applies the preservative treatment to the arms.

(d) *Material requirements--(1) Material and grade.* All arms furnished under the specification in this section shall be free of brashy wood, decay, and shall meet additional requirements as shown on specific drawings in this section. Arms shall be made of one of the following:

(i) Douglas-fir which conforms to the applicable provisions of paragraphs 170 and 170a, or the applicable transmission arm provisions of paragraphs 169 and 169a of the West Coast

Lumber Standard No. 17 (incorporated by reference in §1728.97). Only coastal origin Douglas-fir shall be used for Douglas-fir arms manufactured under the specification in this section;

(ii) Southern Yellow Pine which conforms to the provisions of Dense Industrial Crossarm 65, as described in Southern Pine Inspection Bureau's Standard Grading Rules for Southern Pine Lumber (incorporated by reference at §1728.97); or

(iii) Laminated wood arms shall conform to ANSI O5.2 and have at least the same load carrying capacity as the solid sawn arms being replaced. The load carrying capacity of the laminated arms shall be determined by one of the procedures outlined in ANSI O5.2. The testing and inspection of laminated arms shall be in accordance with AITC 200 (incorporated by reference at §1728.97).

(2) *Alternative arms.* Borrowers may use alternative arms that are listed in Informational Publication 202-1, *List of Materials Acceptable for Use on Systems of USDA Rural Utilities Service Borrowers*. For information on the availability of such material, contact the Chairman, Technical Standards Committee "A" (Electric), 1400 Independence Ave., S.W., Stop 1569, Washington, D.C., 20250-1569, or go to: https://www.rd.usda.gov/files/UEP_LoM.pdf.

(3) *Knots.* Well-spaced round, firm, and tight knots are permitted.

(i) Slightly decayed knots are permitted, except on the top face, provided the decay extends no more than $\frac{3}{4}$ of an inch into the knot and provided the cavities will drain water when the arm is installed. For knots to be considered well-spaced, the sum of the sizes of all knots in any 6 inches of length of a piece shall not exceed twice the size of the largest knot permitted. More than one knot of maximum permissible size shall not be in the same 6 inches of length. Slightly

decayed, firm, or round “pin knots” ($\frac{3}{8}$ of an inch or less) are not considered in size, spacing, or zone considerations.

(ii) Knots are subject to limits on size and location as detailed in Tables 1 and 2 to this paragraph (d)(3)(ii).

Table 1 to paragraph (d)(3)(ii)—Knot Limits for Distribution Arms
(See Figure 1 to this section)
[All dimensions in inches]

Class of Knot and Location	Maximum Knot Diameter	
	Close Grain	Dense Grain
Round Knots		
Single Knot: Maximum Diameter Center Section ¹		
Upper Half	$\frac{3}{4}$	1
Lower Half	1	$1\frac{1}{4}$
Elsewhere	$1\frac{1}{4}$	$1\frac{1}{2}$
Sum of Diameters in 6-Inch Length: Maximum Center Section		
Upper Half	$1\frac{1}{2}$	2
Lower Half	2	$2\frac{1}{2}$
Elsewhere	$2\frac{1}{2}$	3

¹No knot shall be closer than its diameter to the pole mounting hole.

Table 2 to paragraph (d)(3)(ii)—Knot Limits for Transmission Arms (See Figure 2 to this section)
[All dimensions in inches]

Pole Mounting Hole Zone ¹	Maximum Diameter for Single Knot		
Upper Half (inner zone)	$\frac{3}{4}$		
Upper Half (outer zone)	1 for close grain		
	$1\frac{1}{4}$ dense grain		
Other Locations Transmission Arm Size ²	Narrow Face	Wide Face (Two Sides)	
		Edge	Along Centerline
$4\frac{5}{8} \times 5\frac{5}{8}$ or less	1	$1\frac{1}{4}$	$1\frac{1}{4}$
$5\frac{5}{8} \times 7\frac{3}{8}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{7}{8}$
$3\frac{5}{8} \times 9\frac{3}{8}$	$\frac{3}{4}$	$1\frac{3}{4}$	$2\frac{1}{4}$

¹No knot shall be closer than its diameter to the pole mounting hole.

²For cross sections not shown, refer to grading rules.

(iii) Knot clusters shall be prohibited unless the entire cluster, measured on the worst face, is equal to or less than the round knot allowed at the specific location.

(iv) Spike knots shall be prohibited in deadend arms. Any spike knot across the top face shall be limited to the equivalent displacement of a knot $\frac{3}{8}$ of an inch deep on one face and the maximum round knot for its particular location on the worst face, with a maximum width of 1 inch measured at the midpoint of the spiked section. Elsewhere across the bottom or side faces, spike knots shall not exceed $\frac{1}{2}$ the equivalent displacement of a round knot permitted at that location, provided that the depth of the knot on the worst face shall not exceed the maximum round knot allowed at that location.

(v) Loose knots shall be prohibited in deadend arms. Loose knots and knot holes shall be permitted only if they allow water to drain when the arm is installed in its normal position. In the center section, upper half, loose knots shall not be greater than $\frac{1}{2}$ the dimensions of round knots. Elsewhere, loose knots shall not be greater than the round knot dimension.

(vi) All knots except those “spike” knots intersecting a corner shall be measured on the least diameter of the knot.

(vii) A knot shall be considered to occupy a specific zone or section if the center of the knot (i.e., pith of knot) is within the zone or on the zone's boundary.

(viii) If a round or oval knot appears on two faces and is in two zones, each face shall be judged independently. When this does not occur, average the least dimension showing on both

faces. Knots which occur on only one face of a free of heart center (FOHC) arm shall be permitted to be 25 percent larger than the stated size.

(ix) Two or more knots opposite each other on any face shall be limited by a sum not to exceed the size of a maximum single knot permitted for the location. On all four faces, all knots shall be well spaced.

(x) No knot over $\frac{5}{8}$ inch in diameter may intersect pin holes in the center section. One-inch diameter knots may intersect insulator pin holes elsewhere.

(e) *Miscellaneous characteristics, features and requirements.* (1) The top face of distribution arms shall not have more than four medium pitch and bark pockets in 8-foot arms, and not more than five pitch and bark pockets in 10-foot arms. Elsewhere a maximum of six medium pitch and bark pockets in 8-foot arms and eight in 10-foot arms shall be permitted. Equivalent smaller pockets shall be permissible. An occasional large pocket is permissible.

(2) Shakes shall be prohibited.

(3) Prior to treatment on properly seasoned arms, single face checks shall not exceed an average penetration of $\frac{1}{4}$ the depth from any face and shall be limited to 10 inches long on the top face, and $\frac{1}{3}$ the arm length on the other faces. Checks shall not be repeated in the same line of grain in adjacent pin holes. The sum of the average depths of checks occurring in the same plane on opposite faces shall be limited to $\frac{1}{4}$ the face depth.

(4) Compression wood shall be prohibited on any face. Compression wood is permitted if wholly enclosed in the arm, more than six annual rings from the surface, and not over $\frac{3}{8}$ of an inch in width.

(5) Insect holes $\frac{3}{32}$ of an inch and larger shall be prohibited. Insect pin holes (i.e. holes not over $\frac{1}{16}$ of an inch diameter) shall be allowed if scattered and not exceeding 10 percent of the arm girth.

(6) Wane shall be allowed on one edge, limited to approximately 1 inch measured across the corner. Outside of the top center section, an aggregate length not to exceed 2 feet may have wane up to $1\frac{1}{2}$ inches on an occasional piece on one or both edges. Bark shall be removed.

(7) Prior to and after preservative treatment, crook, bow, or twist shall not exceed $\frac{1}{2}$ of an inch in 8-foot arms and $\frac{5}{8}$ of an inch in 10-foot arms.

(f) *Manufacturing--(1) Quality of work.* All arms shall be of the highest quality production. Arms shall be dressed on all four sides, although “hit and miss skips” may occur on two adjacent faces on occasional pieces.

(2) *Dimensions and tolerances.* All dimensions and tolerances shall conform to those shown on the drawings in this section or drawings supplied with the purchase order. Arms supplied shall meet or exceed minimum dimensions shown on the drawings in this section. Cross-sectional dimensions shall be measured and judged at about $\frac{1}{4}$ the arm length, except when the defects of “skip dressing” or “machine bite or offset” are involved.

(3) *Shape.* The shape of the arms at any cross section, except for permissible wane, shall be as shown on the respective drawings in this section or supplied with the order. The two top edges may be either chamfered or rounded $\frac{3}{8}$ of an inch radius. The two bottom edges shall be slightly eased $\frac{1}{8}$ of an inch radius for the entire length.

(4) *Lamination techniques.* Lamination techniques shall comply with ANSI O5.2.

(5) *Pin and bolt holes.* Pin and bolt holes shall be smoothly bored without undue splintering where drill bits break through the surface. The center of any hole shall be within $\frac{1}{8}$ of an inch of the center-line locations on the face in which it appears. Holes shall be perpendicular to the starting and finishing faces.

(6) *Incising.* The lengthwise surfaces of Douglas-fir arms shall be incised a minimum of $\frac{1}{4}$ of an inch deep. The incision shall be reasonably clean cut with a spacing pattern that ensures uniform penetration of preservative.

(g) *Conditioning prior to treatment.* AWPAT1 (incorporated by reference at § 1728.97) shall be followed.

(1) All solid sawn arms shall be made of lumber which has been kiln-dried. Douglas-fir arms shall have an average moisture content of 19 percent or less, with a maximum not to exceed 22 percent in a single arm. Southern Yellow Pine arms shall have an average moisture content of 22 percent or less, with a maximum not to exceed 30 percent in a single arm.

(2) Moisture content levels shall be measured at about $\frac{1}{4}$ the length and at a depth of about $\frac{1}{5}$ the arm's thickness. Additionally, the moisture content gradient between the shell (i.e. $\frac{1}{4}$ of an inch deep) and the core (i.e. about 1 inch deep) shall not exceed 5 percentage points.

(3) A minimum of at least 20 solid sawn arms per treating charge shall be measured and the individual results recorded by the producer to verify moisture content.

(4) The moisture content of lumber used in laminating shall, at the time of gluing, be within the range of 8 to 12 percent, inclusive.

(h) *Preservatives.* (1) Creosote, water-borne preservatives, pentachlorophenol and copper naphthenate shall conform to the requirements of AWPA U1 (incorporated by reference at §1728.97). Oxide formulations of waterborne preservatives shall be supplied. If CCA is the selected preservative, CCA-C shall be the type required.

(2) Douglas-fir arms shall not be treated with CCA.

(i) *Preservative treatment.* (1) All timber products manufactured under the specification in this section shall be pressure treated. AWPA T1 shall be followed.

(2) These materials may be further conditioned by steaming, or by heating in hot oil (Douglas-fir), within the following time and temperature limits:

	Max. Time (hours)	Temperature
(i) Steam	3	220 °F
(ii) Heating in Preservation	3	210 °F

(3) A final steam or hot oil bath may be used only to meet cleanliness requirements. Total duration of the final steam bath shall not exceed 2 hours and the temperature shall not exceed 240 °F.

(j) *Results of treatment--(1) Penetration and retention.* The quality control supervisor shall test or supervise the testing of each treated charge for penetration and retention.

(2) *Method of sampling.* When testing penetration and retention, a borer core shall be taken from a minimum of 20 arms in each treating charge. The borings shall be taken from any face except the top face at a point as close to the end as possible, being at least 3 inches from the end of the arm and no closer than 3 inches from the edge of the holes. The bored holes shall be plugged with treated plugs. Borings from laminated arms shall not be taken from the same laminate unless there is an end joint separation.

(3) *Preservative penetration.* All of the sapwood present in Douglas-fir and southern yellow pine arms shall be completely penetrated with preservative. Preservative penetration in the heartwood of Douglas-fir arms shall be not less than 3 inches longitudinally from the edge of holes and ends, and at least $\frac{3}{16}$ inch from the surface of any face.

(4) *Preservative retention.* Preservative retention in the outer 0.6 inch for Douglas-fir arms and in the outer one inch of southern yellow pine arms shall be not less than the following:

Preservative	Retention (pcf)
(i) Creosote	8.0
(ii) Pentachlorophenol	¹ 0.4
(iii) ACA, ACZA, or CCA-C	0.4
(iv) Copper Naphthenate	0.04

¹This penta retention is for the lime ignition method. If the copper pyridine method is used when timbers may have been in contact with salt water, a penta retention of 0.36 pcf is required for all species native to the Pacific Coast region.

(5) *Arms surfaces.* The surfaces of all arms shall be free from oil exudation (bleeding) and pentachlorophenol crystallization (blooming), and other surface deposits.

(6) *Retreatment of arms.* Arms may be retreated no more than twice. Initial treatment steaming time plus re-treatment steaming time, combined, shall not exceed total steaming time allowed.

(k) *Marking/branding.* (1) Before treatment, arms shall be legibly branded to a depth of approximately $\frac{1}{16}$ of an inch, with the top of the brand oriented to the top of the arm. The brand shall be placed on either of the wide surfaces of the arm, approximately one foot from the midpoint of the piece.

(2) The letters and figures shall be not less than $\frac{1}{2}$ of an inch in height.

(3) The brand shall include:

(i) The manufacturer's identification symbol;

(ii) Month and year of manufacture;

(iii) Species (DF for Douglas-fir and SP for southern yellow pine);

(iv) Preservative (C for creosote, P for penta, S for waterbornes, N for Copper Naphthenate);

and

(v) Required retention. An example of required retention is: M-6-16 Manufacturer - Month - Year and DF-P-.4 Douglas-fir - penta treated - .40 pcf retention

(4) Brands and quality assurance/inspection marks shall be removed from arms that do not meet these specifications.

(l) *Storage*. (1) Producers may manufacture/treat RUS arms for reserve treated stock under either of the allowable purchase plans. (See paragraph (b)(6) of this section).

(2) Arms treated with creosote or oil-borne preservatives, and which have been held in storage for more than 1 year before purchase and shipment to the borrower shall be re-assayed before shipment. Any such arms found to be nonconforming for retention shall be retreated and reassayed per the requirements of this section of the specification.

(m) *Drawings*. (1) The drawings of Figure 3 to this section, Crossarm Drilling Guide, have a type number and show in detail the hole size, shape, and pattern desired for arms ordered under the specification in this section.

(2) Purchase orders shall indicate the type arm required.

(3) Arms shall be furnished in accordance with the details of the drawings in this section or in accordance with drawings attached to the purchase order.

(4) Appropriate drawings for transmission arms are to be specified and included with purchase orders. Technical drawings for transmission arms are published in Bulletin 1728F-811 (incorporated by reference at §1728.97) and Bulletin 1728F-810 (incorporated by reference at §1728.97).

(n) *Destination inspection.* The RUS borrower shall have the prerogative to inspect materials at destination. All provisions of the specification in this section shall apply to material inspected at destination. If a disagreement arises over conformance of materials received at destination, it shall be the responsibility of the supplier to resolve the matter with the purchaser.

(o) *Purchase of related specifications and standards.* (1) All ANSI and AWP standards may be purchased from: American Wood Protection' Association (AWPA), P. O. Box 361784, Birmingham, AL 35236-1784, Telephone (205)733-4077, Web address: <http://www.awpa.com>.

(2) Standard Grading Rules for Southern Pine Lumber and Special Products Rules for Structural, Industrial, and Railroad Freight Car Lumber may be purchased from: Southern Pine Inspection Bureau, 4709 Scenic Highway, Pensacola, Florida 32504-9094, Telephone (850) 434-2611, Web address: <http://www.spib.org>.

(3) Standard Grading Rules for West Coast Lumber may be purchased from: West Coast Lumber Inspection Bureau, P.O. Box 23145, Portland, Oregon 97281, Telephone (503) 639-0651, Web address: <http://www.wclib.org>.

(4) AITC 200 may be purchased from: American Institute of Timber Construction, 7012 S. Revere Park Way, Englewood, Colorado 80112, Telephone (303) 792-9559, Web address: <http://aitc-glulam.org>.

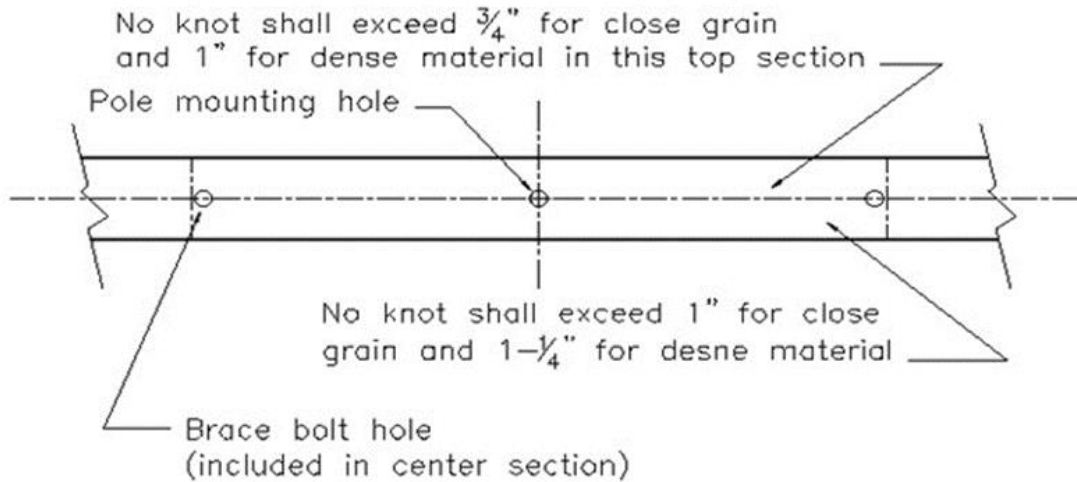
(p) *Information to be completed by the borrower.* When using the specification in this section, the borrower or borrower's representative should enter into a written agreement with a material supplier by way of a contract or purchase order. This agreement should

state that all arms shall be manufactured in strict accordance with the specifications in this section.

Figures 1 and 2 to § 1728.201
Distribution and Transmission Arms

DISTRIBUTION ARMS

Figure 1



TRANSMISSION ARMS POLE MOUNTING HOLE ZONE

Figure 2

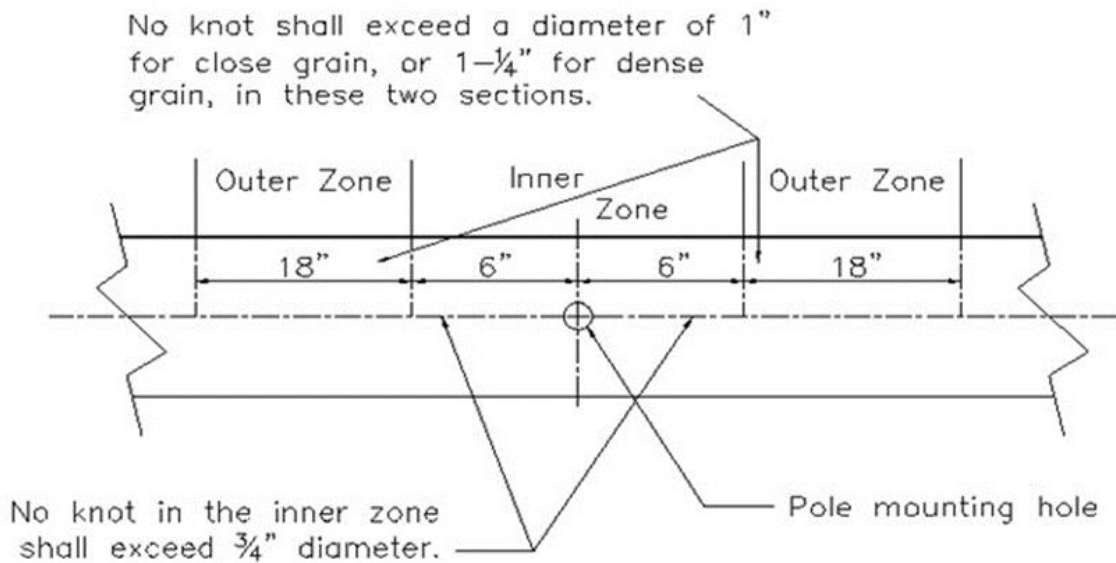
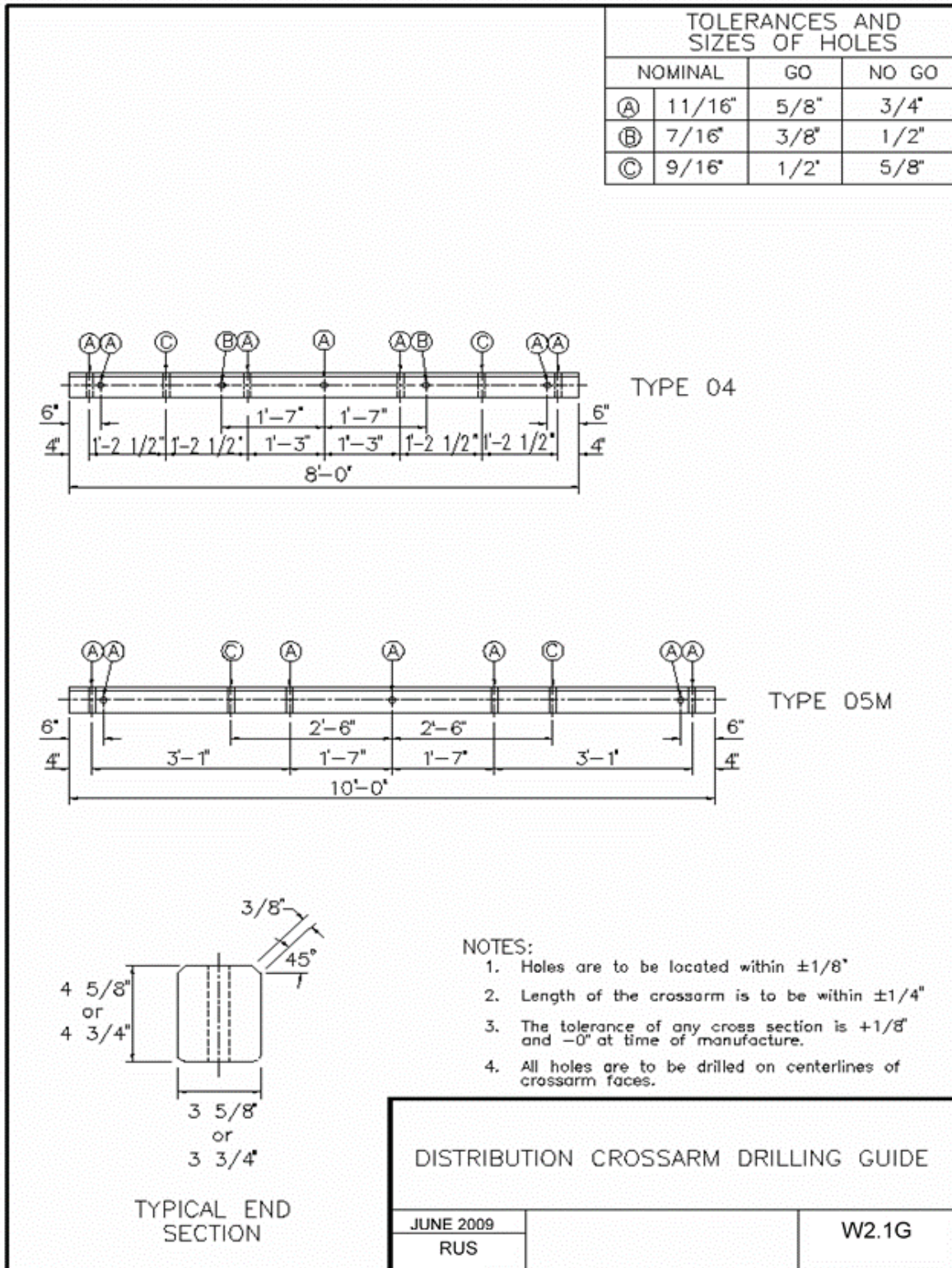


Figure 3 to §1728.201 – Crossarm Drilling Guide



5. Revise §1728.202 to read as follows:

§ 1728.202 Bulletin 1728H-702, Specification for Quality Control and Inspection of Timber Products.

(a) *Scope.* (1) The specification in this section describes the responsibilities and procedures pertaining to the quality control by producers and pertaining to inspection of timber products produced in accordance with the following RUS specifications in §1728.201, and poles, covered in Bulletin 1728F-700 (incorporated by reference in §1728.97) and in §1755.97 of this chapter.

(2) Where there is conflict between the specification in this section and any other specification referred in this section, the specification in this section shall govern.

(3) The specification in this section also describes and designates responsibilities of RUS borrowers in regard to their purchases under the specifications referenced in paragraph (a)(1) of this section.

(b) *General stipulations.* (1) Conformance of poles and crossarms to RUS specifications is the responsibility of the producer. A member of the producer's staff shall be designated as quality control supervisor and charged with the responsibility for the exercise of proper quality control procedures throughout the production process. The primary responsibility of third party inspection agencies is to verify that producers involved in the manufacture of RUS treated wood products have functional in-house quality control systems in place that result in the shipment of materials meeting applicable RUS specification requirements to borrowers.

(2) The requirements of AWWA M3 (incorporated by reference at §1728.97), pertaining to recordkeeping, pretreatment storage, analytical laboratories, plant gauges, and other plant facilities, shall be followed.

(3) Treated wood products intended for RUS borrowers shall not be inspected when in the opinion of the inspector, unsafe conditions are present.

(4) Poles and crossarms can be purchased under either of two purchase plans; a RUS approved Quality Assurance Plan or an Independent Inspection Plan. The method of inspection described in this section shall be used no matter which plan timber products are purchased under.

(5) Under the Independent Inspection Plan, the borrower should designate in the purchase order which inspection agency it has selected. Unless the borrower contracts for inspection as a separate transaction, the treating company shall obtain the services of the borrower's designated inspection agency. For reserve treated stock held in inventory by the producer, the producer shall obtain the services of the appropriate inspection program.

(6) All third-party inspectors involved in the inspection of RUS products shall maintain their impartiality when providing their inspection service. This requires that these individuals and their employers, as well as producers and suppliers involved in providing RUS borrowers with treated wood products, maintain the greatest degree of professional separation during the performance of their respective functions to eliminate any possible conflict of interest.

(7) With the exception of financial agreements for inspection services, inspection agencies shall not accept nor provide gratuities or free services to suppliers.

(8) Inspection agencies shall not offer product warranties on inspected material.

(9) Inspection agencies shall have and maintain liability insurance in the amount of \$500,000 and a surety bond or miscellaneous Errors and Omission insurance for consequential damages for not less than \$250,000. Evidence of compliance to the requirement in this paragraph (b)(9) shall be forwarded to the RUS annually. The evidence shall be in the form of a certificate of insurance or a Bond signed by a representative of the insurance or Surety Bonding company and

include a provision that no change in, or cancellation of, will be made without the prior written notice to Chairman, Technical Standards Committee “A” (Electric).

(10) Inspection agencies shall maintain their own properly equipped laboratory that, at a minimum, is able to run the referee methods listed in table 1 to this paragraph (b)(10) for retention analysis for all preservatives being inspected. This laboratory shall be independent from any treating plant laboratory. Inspection Agencies may use one central laboratory. All XRF units maintained by third party inspection agencies as part of their RUS required laboratories shall be calibrated at least quarterly by said agency utilizing the referee method for each preservative treatment being analyzed or via comparison with a set of graduated treated wood standards. Each agency shall keep an up-to-date written record of these quarterly calibration results. AWPA A83 (incorporated by reference at § 1728.97) shall be followed for Pentachlorophenol testing, AWPA A6 (incorporated by reference at § 1728.97) shall be followed for Creosote testing and AWPA A9 (incorporated by reference at § 1728.97) shall be followed for XRF be followed, as illustrated in the following table:

Table 1 to paragraph (b)(10)

PRESERVATIVE	REFEREE METHOD
Pentachlorophenol	Lime Ignition, Copper Pyridine
Creosote	Toluene Extraction
Waterborne	X-ray fluorescence (XRF)
Copper Naphthenate	X-ray fluorescence (XRF)

(11) If used for analysis, plant XRF units shall be accurate and generate reproducible results per AWPA A9. At least once monthly, their accuracy and precision shall be checked by the

third-party inspector. This verification shall consist of the inspector taking a retention sample previously analyzed by the plant quality control supervisor on-site and rerunning it in the inspection agency's own laboratory using said agency's XRF unit or the referee method for a specific preservative. If the inspection agency's analytical result is within + 5% of the plant's retention result on that sample, the plant XRF unit needs no further calibration.

(12) Individual inspectors in the employ of inspection agencies shall be properly trained and experienced. See § 1728.203, for details of an inspector's minimum qualifications. Upon request, inspection agencies must provide RUS with detailed written documentation verifying that each of their employees inspecting RUS materials has the minimum experience and training described in § 1728.203. Failure of an individual inspector to follow proper procedures or failure of an inspection agency to properly train and supervise their inspectors or follow applicable RUS specifications constitutes grounds for RUS debarment of said inspector and said inspection agency from future inspection of RUS financed material.

(c) *Quality control and inspection procedures.* It is the responsibility of the plant quality control supervisor to perform the following procedures to ensure that a particular lot of material conforms to the requirements of the applicable Agency specification prior to treatment. After the plant quality control supervisor has performed these procedures, a particular lot of material shall be released to the inspector for verification of conformance.

(1) For poles, inspection prior to treatment shall include:

(i) Ample space and assistance shall be provided by the treating plant for handling and turning poles. Regardless of the purchase plan poles are being purchased under, all poles in a lot shall be inspected by the plant quality control supervisor prior to offering the lot for verification by a third party.

(ii) When limited by the purchaser in a written purchase order, moisture content shall be measured with a calibrated electronic moisture meter. Calibration of the moisture meter shall include not only the zero settings for the X and Y readings, but also two resistance standards for 12 and 22 percent moisture content. Material failing to conform for moisture content may be retested upon request after recalibration of the moisture meter.

(iii) Dimensions, length, and circumference shall be measured by a standard steel tape to determine that they meet specification requirements and that they agree with the details for class and length found in the face brand/tag and butt of each pole. If it is obvious by visual comparison with a measured pole that the brand information regarding class and length is correct, individual poles need not be measured. Pole circumference dimensions measured prior to treatment shall govern acceptance. Reduction in dimension due to treatment and shipping shall be no more than 2 percent below the minimum for the pole class.

(iv) Poles in a lot shall be of the same seasoning condition and all shall be inspected for decay. If the plant quality control supervisor suspects that decay is present in a pole, a slice from both ends shall be cut for closer examination. If 3 percent or more of the poles in the lot inspected by the plant quality control supervisor show evidence of decay, the entire lot shall be unconditionally withdrawn without further sorting.

(v) Under the Independent Inspection Plan, all poles shall be examined by the third-party Inspector for verification of conformance. Under a RUS approved Quality Assurance Plan, the number of poles inspected for verification of conformance may vary according to the terms of the approved plan.

(vi) Whenever it becomes evident during third party inspection of any lot of poles offered by the producer that non-conforming pieces exceed 3 percent for any one defect or 5 percent for all

defects, the inspector shall withhold further inspection and reject the balance of the lot. After the producer has acted to eliminate all defective pieces, the rejected balance may be inspected as a new lot. Sorting, however, shall not be permitted when a lot has been rejected for decay.

(vii) Re-examination for mechanical damage or deterioration and for original acceptance shall be conducted on timber products not treated within 10 days after the original third-party inspection.

(2) For crossarms, inspection prior to treatment shall include:

(i) Regardless of the purchase plan arms are being purchased under, all arms in a lot shall be inspected by the plant quality control supervisor prior to offering the lot for verification by a third party. After the plant quality control supervisor has performed the procedures in paragraphs (c)(2)(ii) through (vii) of this section, a particular lot of arms shall be released to the inspector for verification of conformance.

(ii) Moisture content of the arms in the lot shall be checked with a calibrated moisture meter.

(iii) Surface inspection of both ends and the side surfaces of each arms. Particular attention shall be paid to visible defects such as compression wood, red heart, honeycomb and other forms of decay, shakes, splits, through checks, low density, wane, undersize, and pitch pockets.

(iv) Inspection of bolt and insulator pin holes for proper location, dimension and excessive splintering.

(v) Inspection of brands for proper location, required content and legibility.

(vi) Under the Independent Inspection, both ends of all crossarms and a random representative sample of the lengthwise side faces of all crossarms shall be inspected. The sample size shall equal 20 percent of the lot size or 200 arms, whichever is smaller. Under a

RUS approved Quality Assurance Plan, the number of crossarms inspected for verification of conformance may vary according to the terms of the approved plan.

(vii) Whenever it becomes evident during third party inspection of any lot of arms offered by the producer that non-conforming pieces exceed 2 percent of the sample size, the entire lot shall be rejected. After the producer has acted to eliminate all defective pieces, the rejected balance may be inspected as a new lot.

(d) *Preservatives*. Creosote, waterborne preservatives, pentachlorophenol and copper naphthenate shall conform to current AWP A U1 (incorporated by reference in §1728.97).

(e) *Results of treatment – Poles*. (1) Following treatment, poles shall be sampled for preservative retention and penetration utilizing a calibrated increment borer 0.2 inches ± 0.02 inches in diameter in accordance with procedures listed in AWP A M2 (incorporated by reference in §1728.97).

(2) Inspectors may take their own retention samples and analyze them concurrently with those taken by the quality control supervisor, but each shall work independently. The results of the plant's analysis shall be presented before verification and acceptance of the charge by the third-party inspector.

(3) Unless otherwise specified, borings shall be taken from the section of the pole extending from 1 foot below the face brand/tag to 1 foot above the face brand/tag. For pressure treated Western Red Cedar, Alaska Yellow Cedar and all butt treated poles, borings shall be taken from the section of the pole approximately 1 foot below groundline.

(4) For all species, core samples shall be taken from 20 poles in charges of 20 or more poles. If a charge consists of less than 20 poles, each pole shall be bored and then individual poles shall be bored a second time to obtain a minimum of 20 core samples. Any additional borings required to

obtain the required 20 core samples shall be taken in a manner that represents the lot of material with respect to variations in size, seasoning condition, or other features that may affect the results of treatment.

(5) Retention and penetration samples shall consist of borings representative of pole volumes for each class and length in the charge, as illustrated in the following table:

Table 2 to paragraph (e)(5)

Number of Poles	Class/Length	Vol. in ft ³	% of Total Vol.	Number of Borings ¹
20	5/40	550	22	4
30	4/40	840	34	7
20	4/45	510	20	4
20	3/45	600	24	5
	Total	2500		

¹Retention and penetration requirements for each different species and preservative are listed in Table 10 of Appendix A, RUS Bulletin 1728F-700, Specification for Wood Poles, Stubs and Anchor Logs (incorporated by reference at §1728.97).

(6) Preservative retention analyses shall be performed per the standard AWPA U1, (incorporated by reference at §1728.97).

(7) Penetration compliance of both poles and crossarms shall be determined in accordance with the standard AWPA A15 (incorporated by reference at §1728.97). Chrome Azurol S and Penta-Check shall be used to determine the penetration of copper containing preservatives and penta, respectively.

(8) All bored holes created by penetration and retention sampling shall be promptly filled with tight fitting treated plugs.

(9) Penetration sampling of poles shall be carried out as follows:

(i) Group A poles (Those poles with a circumference of 37.5 inches or less at 6 feet from butt.):

(A) Bore 20 poles or 20 percent of the poles in the charge, whichever is greater. Accept all poles in the charge for penetration if every boring in the sample conforms. If any sample fails penetration, bore all poles in the charge.

(B) If more than 15% of the poles in the charge are found to be nonconforming, the entire charge shall be retreated. If 15% or less are found to be nonconforming, remove and retreat only those that are nonconforming.

(ii) Group B poles (Those poles with a circumference greater than 37.5 inches at 6 feet from the butt.):

(A) For Group B poles 45 feet and under, bore each pole in the charge. If more than 15% of these poles are found to be nonconforming, the entire charge shall be retreated. If 15% or less are found to be nonconforming, remove and retreat only those that are nonconforming.

(B) For Group B poles 50 feet and over, bore each pole twice at 90 degrees apart and accept only those poles conforming to penetration in both borings.

(iii) Nonconforming poles may be treated only twice. The letter "R" shall be added to the original charge number in the butts of all poles that are retreated. Poles failing to meet treatment requirements after two retreatments shall be permanently rejected and all brand and butt information removed.

(f) *Results of treatment - Crossarms.* Retention and penetration samples shall be taken from not less than 20 crossarms in each charge. The sampling method and retention and penetration requirements for both Douglas-fir and Southern Yellow Pine crossarms are listed in § 1728.201.

(g) *Product acceptance.* (1) Third party inspectors shall verify their acceptance of untreated poles that have been offered by the producer as conforming by marking each accepted piece in the tip with a clear, legible hammer stamp. Following treatment, inspectors shall verify their

acceptance of treated poles that have been offered by the producer as conforming by marking each accepted piece in the butt with a clear, legible hammer stamp. Inspection marks are not to be placed in the butt surfaces of any poles prior to treatment and proper retention analysis and penetration testing being completed. The inspector shall personally mark each piece for acceptance and shall not delegate this responsibility to any other individual.

(2) Each inspector or inspection agency shall retain for a period of at least one year a copy or transcript of each pre-treatment inspection report and a copy of analytical worksheets covering retention and penetration test results for each treated charge of material inspected. On request, a copy or transcript of these reports shall be furnished to the Chairman, Technical Standards Committee "A", Rural Utilities Service, Washington, DC 20250-1569.

(i) On each inspection report the third-party inspector and the plant quality control supervisor shall certify in writing that the material listed on the report has been properly inspected both before and after treatment and that the preservative used met the requirements of this section.

Inspection reports shall also include the following information:

- (A) Conditioning details of the material prior to treatment.
 - (B) Total number of pieces offered by the producer.
 - (C) Number of pieces rejected by the inspector, cause for rejection.
 - (D) Copy of preservative analysis (usually supplied by the preservative supplier).
 - (E) Treating sheet containing details of treatment for each charge.
 - (F) Separate worksheets for retention analyses done by the plant quality control supervisor and by the inspector.
 - (G) Penetration result on each individual core boring taken from poles in the charge.
- (ii) [Reserved]

(h) *Laminated materials.* (1) All lumber used to fabricate laminated materials shall be inspected and its grade verified by a qualified lumber grader, then marked appropriately.

(2) Laminated materials shall comply with manufacturing requirements specified in ANSI O5.2 (incorporated by reference at §1728.97). Melamine urea adhesives shall not be used. Plant quality control procedures and any third-party inspection shall be conducted in accordance with AITC 200 (incorporated by reference at §1728.97), and §1728.201 (Bulletin 1728H-701).

(3) Following treatment, laminated material shall be checked for proper preservative retention and penetration, and for any evidence of delamination. All conforming laminated materials shall be clearly marked with either an American Institute of Timber Construction (AITC) or American Plywood Association (APA) quality stamp.

(i) *Safety provisions.* Poles intended for agency borrowers shall not be inspected when, in the opinion of the inspector, unsafe conditions are present.

6. Add §1728.203 to read as follows:

§ 1728.203 Inspector's qualifications.

Inspection agencies must assure borrowers that employees assigned to the inspection of timber products and preservative treatments are competent and experienced. In general, any of the following examples are considered as minimum qualifying experience before an individual may be permitted to inspect timber products for borrowers:

- (a) Three years of direct experience inspecting untreated and treated utility products; or
- (b) Three years of direct experience conducting in-plant quality control work at a treating plant producing treated utility products; or

(c) Under the direct supervision of an experienced, qualified inspector, the individual shall have performed the following:

(1) For poles, inspected at least 10,000 individual untreated poles, and checked preservative penetration on at least 3,000 individual poles;

(2) For crossarms, inspected at least 5,000 individual untreated arms and checked penetration on at least 500 individual arms;

(3) Conducted at least 100 retention assays, including at least 25 analyses for each different preservative treatment being inspected.

(d) In both paragraphs (a) and (b) of this section, the experience should be not less than that required in paragraph (c) of this section.

(e) Individuals involved in the inspection of more than one commodity must have the minimum experience required in paragraph (c) of this section for each respective product.

PART 1755 – TELECOMMUNICATIONS POLICIES ON SPECIFICATIONS, ACCEPTABLE MATERIALS, AND STANDARD CONTRACT FORMS

7. The authority citation for part 1755 continues to read as follows:

Authority: 7 U.S.C. 901 et seq., 1921 et seq., 6941 et seq.

8. Revise § 1755.97 to read as follows:

§ 1755.97 Telephone standards and specifications.

(a)(1) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved material is available for inspection at the Rural Utilities Service, U.S. Department of Agriculture, Room 5170-S, Washington, DC 20250–1522, call (202) 720-8674 and is available as listed in this section. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of these materials at NARA, call (202) 741–6030 or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

(2) To comply with the provisions of this part, you must follow the requirements set out in the RUS telecommunications bulletins incorporated by reference. These materials are incorporated as they exist on the date of the approval and notification of any change in these materials will be published in the Federal Register. The terms “RUS form”, “RUS standard form”, “RUS specification”, and “RUS bulletin” have the same meaning as the terms “REA form”, “REA standards form”, “REA specification”, and “REA bulletin”, respectively, unless otherwise indicated. For information on other standards incorporated by reference into this part see §1755.901.

(b) Rural Utilities Service, U.S. Department of Agriculture, Room 5170-S, U.S. Department of Agriculture, Washington, DC 20250, <https://www.rd.usda.gov/publications/regulations-guidelines/bulletins>.

- (1) Bulletin 345-39, RUS specification for telephone station protectors, August 19, 1985.
- (2) Bulletin 345-50 PE-60, RUS specification for trunk carrier systems, September 1979.
- (3) Bulletin 345-54 PE-52, RUS specification for telephone cable splicing connectors, December 1971.
- (4) Bulletin 345-55 PE-61, RUS specification for central office loop extenders and loop extender voice frequency repeater combinations, December 1973.
- (5) Bulletin 345-65, PE-65, Specification for shield bonding connectors, March 22, 1985.
- (6) Bulletin 345-66 PE-64, RUS specification for subscriber carrier systems, September 1979.
- (7) Bulletin 345-69 PE-29, RUS specification for two-wire voice frequency repeater equipment, January 1978.
- (8) Bulletin 345-72 PE-74, RUS specification for filled splice closures, October 1985.
- (9) Bulletin 345-78 PE-78, RUS specification for carbon arrester assemblies for use in protectors, February 1980.
- (10) Bulletin 345-180 Form 397a, RUS specifications for voice frequency repeaters and voice frequency repeated trunks, January 1963.
- (11) Bulletin 345-183 Form 397d, RUS design specifications for point-to-point microwave radio systems June 1970.

(12) Bulletin 345-184 Form 397e, RUS design specifications for mobile and fixed dial radio telephone equipment May 1971.

(13) Bulletin 1728F-700, RUS Specification for Wood Poles, Stubs and Anchor Logs, April 15, 2019.

(14) Bulletin 1753F-150 Form 515a, Specifications and Drawings for Construction of Direct Buried Plant, September 30, 2010.

(15) Bulletin 1753F-151 Form 515b, Specifications and Drawings for Construction of Underground Plan, September 12, 2001.

(16) Bulletin 1753F-152 Form 515c, Specifications and Drawings for Construction of Aerial Plant, September 17, 2001.

(17) Bulletin 1753F-153 Form 515d, Specifications and Drawings for Service Installation at Customer Access Locations, September 17, 2001.

9. Amend § 1755.98 by revising the table to read as follows:

§1755.98 List of telecommunications specifications included in other 7 CFR parts.

* * * * *

Section	Issue date	Title
(a) 1728.202	April 15, 2019	RUS Specification for Quality Control and Inspection of Timber Products.
(b) [Reserved]		

Chad Rupe,

Administrator, Rural Utilities Service.

[FR Doc. 2019-12238 Filed: 6/17/2019 8:45 am; Publication Date: 6/18/2019]